IN THE SPECIFICATION

Please amend the specification as follows:

Please replace the paragraph beginning at page 13, line 26, with the following rewritten paragraph:

Once all four AC measurements are made, the signal is preferably briefly reduced to zero amplitude, as shown at 160. The DC excitation is then begun, as shown at 170. The amplitude of the DC excitation is advantageously selected based on the reagent being used, in order to maximise the resulting response or response robustness. For example, if ferricyanide is being used in a biamperometry system, the DC amplitude is preferably about 300mV. For another example, if a nitrosoaniline derivative is being used in a biamperometry system, the DC amplitude is preferably about 500-550mV. In the alternative, if a third reference electrode is used, the DC [[~~applitude~~]] **amplitude** is preferably 600 mV (versus the silver/silver chloride reference electrode) for ferricyanide, and 40-100 mV (versus the silver/silver chloride reference electrode) for nitrosoaniline derivative. During DC excitation, measurements are preferably made at a rate of 100 pts/sec. The current response will follow a decay curve (known as a Cottrell curve), as the reaction is limited by the diffusion of unreacted glucose next to the working electrode. The resulting stable-state amplitude (measured or projected) is used to determine a glucose estimation of the sample, as is known in the art. A corrected estimation is then determined that corresponds more closely to the concentration of glucose in the blood, by using the impedance of the sample to the AC signal to correct for the effects of interferants, as explained in greater detail hereinbelow.

Please replace the paragraph beginning at page 24, line 9, with the following rewritten paragraph:

Those skilled in the art will [[~~recognize~~]] **recognize** that that the coefficients can be empirically determined for any particular test strip architecture and reagent chemistry. The present invention therefore may be used to estimate hematocrit using only AC phase angle measurements preferably made at at least one AC frequency, more preferably made at at least two AC frequencies, and most preferably made at at least four AC frequencies.

Please replace the paragraph beginning at page 48, line 27, with the following rewritten paragraph:

The top and bottom polycarbonate parts were laminated together with the laser cut adhesive tapes using a custom-built jig to ensure reproducible fabrication. For each test device, a fluid receptor region [[~~defineing~~]] **defining** the entrance to the capillary channel was formed by an opening pre-cut into the upper polycarbonate sheet and adhesive tape components. For each of the three channel heights, channel widths of 0.5mm, 1.00mm, 1.5mm, 2.00mm, 3.00mm, and 4.00mm were fabricated. The capillary channel length for all devices was 50mm. Twenty-eight (28) of each of the eighteen (18) device types were constructed. The assembled devices were plasma treated by Weidman Plastics Technology of Dortmund, Germany. The following plasma treatment conditions were used:

Please replace the paragraph beginning at page 49, line 19, with the following rewritten paragraph:

Each of the test devices was dosed with a fixed volume of venous blood having a hematocrit value of 45%. Flow and flow front behavior was captured on videotape for later analysis. It was determined that the relative dimensions of the capillary fill channel determined the flow front behavior. Devices to the left of the dashed line in FIG. 31 (devices A2, A4, **A5,** B2, B4, B5, C2, C4, and C5) resulted in a convex flow front

behavior, while devices to the right of the dashed line (devices A6, A8, A11, B6, B8, B11, C6, C8, and C11) displayed a concave flow front behavior. Both the convex and concave flow front behaviors are schematically illustrated in FIG. 31. This data shows that the aspect ratio between the height and the width of the capillary fill space is a determining factor in whether the sample flow front is convex or concave.